

Visualizing Climate Change Risk and Adaptation Options for California: CalAdapt

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Fact Sheet

The Issue

The impacts of climate change, such as changes in temperature and precipitation patterns, and earlier melting of snowpack that in turn affects the state's water supply and hydroelectricity generation, are being observed in California. Sound adaptation options need to be explored and strategized at all levels of community—from local to statewide. One of the major challenges facing the members of the climate change adaptation community is the scarcity of tools and methods to convey to a wider audience the risk posed by climate change. There is a serious bottleneck in delivering relevant information, much of which is spatial, to decision makers in a manner that allows them to turn climate change research results into effective adaptation decisions and policies.

On December 2, 2009, Governor Arnold Schwarzenegger released a Comprehensive Climate Adaptation Strategy for California and unveiled the prototype CalAdapt website (<http://www.climatechange.ca.gov/visualization/index.html>) that was developed under funding and technical direction from the California Energy Commission and Google. CalAdapt is a web-based interactive visualization tool for conveying the risks of climate change to Californians who live in affected communities and local decision makers.



Contra Costa County on fine-scale modeling grids.
Image from CalAdapt proto website

Project Description

This project has three main objectives:

- Further develop the CalAdapt prototype website into a fully functional interactive climate change risk assessment tool.
- Provide climate change data and information to local, regional, and state level entities via the CalAdapt website to advise their planning processes.
- Educate people about the potential impacts of climate change and adaptation options in California.

The CalAdapt site will be developed to have two levels of technical sophistication to accommodate

different levels of technical knowledge and user purposes.

The first level will be for educating the general public and policy makers with very little or no knowledge of climate change science who are visiting the site to learn about the effects of climate change on their hometown or other locations of interest. The site will offer educational video clips or movies demonstrating the effects of climate change.

The primary users of the second level will be staff and resource managers who require more technical data and information for their work. The majority of the CalAdapt website will be dedicated to this second level.

PIER Program Objectives and Anticipated Benefits for California

The energy sector is the main source of greenhouse gas emissions in California and, therefore, must help identify potential climate change impacts and the development of coping and adaptation strategies. Climate change will substantially affect energy generation and demand, which require tracking how climate is changing and estimating how it may evolve in the rest of this century. Because California has diverse climate and ecological zones, adaptation plans must be tailored to the local level.

The CalAdapt website will be a focal point of data and information dissemination for both PIER and non-PIER work. CalAdapt will allow the general public to see impacts of climate change for their hometown, or technical staff working on adaptation measures to perform statistical analyses and produce graphs and other visual materials. All of these functions contribute toward the state becoming better equipped with locale-specific

adaptation strategies, ultimately benefitting California residents.

Project Specifics

Contract Number: 500-10-007

Contractor: University of California, Berkeley

Contract Amount: \$549,975

Match Funding: \$0

Contract Term: August 2010 to February 2013

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